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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,924	01/18/2002	Nima Mokhlesi	M-11821 US	1035

36257 7590 03/04/2004

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EXAMINER

HOANG, HUAN

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/052,924

Applicant(s)

MOKHLESI ET AL.

Examiner

Huan Hoang

Art Unit

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9, 29-32, 34, 35, 37-43, 51, 53-57 and 59-62 is/are rejected.
- 7) ☒ Claim(s) 5, 8, 10-28, 33, 36, 44-50, 52, 58 and 63-70 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 13.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-4, 6, 7 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Lee et al..

Lee et al. discloses a method of reading the data content of a non-volatile memory storage unit having all the steps as recited in claims 1-4, 6, 7 and 9 as follows:

- applying a set of sense voltage waveforms (voltages applied to the control gate, the drain and the source) to the terminals of the memory storage unit during a read interval;
- measuring a parameter value (column 1, lines 31-38);
- applying an episodic stimulus (low number of large magnitude jump-like voltage changes, Abstract, lines 3-5) to the memory storage unit during the read interval, wherein the level of stimulus affects the parameter value and whereby the contribution of noise component is reduced (Abstract).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 29-32, 34, 35, 37-43, 51, 53-57 and 59-62 are rejected under 35

U.S.C. 102(b) as being anticipated by Dunlap et al..

Dunlap et al. discloses a method of operating a non-volatile memory having all the steps as recited in claims 29-32, 34, 35, 37-43, 51, 53-57 and 59-62 as follows:

- applying a set of voltages (voltages to control gate, source line and bit line, column 4, line 60 to column 5, line 16) a storage unit (column 4, lines 32-42) of the non-volatile memory during an interval (read operation);
- determining the conduction characteristics of the storage unit in response to the set of voltages (column 5, lines 15-16), wherein the set of voltages includes an episodic stimulus component.

The control gate voltage is considered an episodic stimulus component because it is ramped up or down (a time varying voltage).

#### ***Allowable Subject Matter***

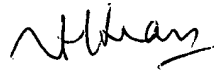
5. Claims 5, 8, 10-28, 33, 36, 44-50, 52, 58 and 63-70 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 8, 10-28, 33, 36, 44-50, 52, 58 and 63-70 recite various features that are not found in the prior art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan Hoang whose telephone number is (571) 272-1779. The examiner can normally be reached on Mon-Fri 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Huan Hoang  
Primary Examiner  
Art Unit 2818

HH  
2/27/04.